

ABSTRACT OF THE DISCLOSURE

A method for improving the etch behavior of disposable features in the fabrication of a semiconductor device is disclosed. The semiconductor device comprises a bottom anti-reflective coating layer and/or a disposable sidewall spacer which are to be removed in a subsequent etch removal process. The bottom anti-reflective coating layer and/or the disposable sidewall spacer are irradiated by heavy inert ions to alter the structure of the irradiated features and to increase concurrently the etch rate of the employed materials, for example, silicon nitride or silicon reacted nitride.